Instructional Plan Format

# Teacher Candidate: Sharla Marquez, Kamie Norling Date: Feb. 23, 2011

**Lesson Title/Focus: Concepts of Multiplication (Arrays, counting by multiples)**

**Standard 3.2.A**

**Learning Targets:** Students learn the meaning of multiplication. They begin to learn multiplication facts and how to multiply increasingly larger numbers. Students use what they are learning about multiplication to solve a variety of problems. With a solid understanding of this key operation, students are prepared to formalize the procedures for multiplication in grades four and five.

**Learning Standard:** Connect various representations of multiplication to the related multiplication equation. Representing multiplication with arrays is a precursor to more formalized area models for multiplication developed in later grades beginning with grade four.

**TSWBAT:** Represent a multiplication equation as an array or by counting by multiples (AKA grouping). *Written on the board as: I can represent multiplication equations in the form of arrays and grouping.*

**Schema:** Ask the class to count by two’s up to the number 10, count by three’s to 30.

**Assessment Strategies**:

**Diagnostic assessment**: Ask the children if they understand that when they count by multiples, (2’s, 3’s, 5’s,) essentially they are multiplying, or grouping.

**Formative assessment**: Using candy given to them, students will be able to represent four multiplication equations that will be listed on the board.

**Summative assessment:** The children will be asked to complete a page from their math workbook. The teacher will walk around the room and check off the students as they complete the assignment given.

**Grouping of Students for Instruction:**

Students will complete this lesson while in their cooperative learning groups.

**Learning Experiences:**

We will open the lesson by asking the class to count by multiples. We will then begin to explain to the learning community that when they are counting by multiples they are essentially grouping, which is otherwise known as MULTIPLYING ☺ We will then show them two different examples of multiplying, ( Arrays and grouping) and how they represent a multiplication equation. After showing them several examples on the board, we will then hand out bags of candy to each student. The learning community will be asked to use the candy provided to them to represent the multiplication equations that have been written on the white board for them. After completing the formative assessment, the students will be asked to open their math workbook and complete page (#). As students are working on the problems, we will walk around the room answering questions and checking off their work once they are done. Those who do not finish in the time allotted will be asked to take home and finish their worksheets, and return them the following day.

**Anticipatory Set:**  We will start by asking the students to count to 10 by 2’s. Then to 50 by 5’s. Explain that counting by multiples is one form of multiplication. Ask the children, “Who likes it when things – like candy bars- multiply?

**State the Learning Target:** At the end of the lesson you will be able to visuallydemonstrate a written multiplication equations using arrays (displays or arrangements), and counting by multiples, also know as grouping. (This *will be written on the board.)*

**Learning Episode:** After opening the lesson with the class counting by multiples, we will explain to the class that counting by multiples is one method of representing a multiplication equation. Other methods include: arrays, repeat addition, and equal jumps on a number line. Today we will only be focusing on Arrays and counting by multiples, with is also known as “grouping.” Using the whiteboard, we will then demonstrate this concept using several multiplication equations. After writing an equation on the board, we will then demonstrate each equation using both the array and grouping methods listed above.

**Guided Practice:** After demonstrating several examples of the Multiplication concept on the whiteboard, the children will be given a baggy with candy in it. They will then be asked to use the candy they have been given to represent the equations that have been written on the board. At this point, if we notice any students struggling with any part of this concept we will revisit the concept in more detail.

**Independent Practice /Closure:** After doing a quick review using candy to represent the multiplication concept, the students will be asked to work on a worksheet in their math workbooks. We, the instructors, will walk around the class answering any questions that students may have and checking off their completed work. Any unfinished work after the allotted time has expired will be sent home as homework.

**These are the materials that you will use for this lesson. All the items need to be stated.**

Dry erase marker, white board, bags of candy, math workbooks.

EQUATIONS TO BE WRITTEN ON WHITEBOARD (candy demonstration)

2 x 5 4 x 7

3 x 8 6 x 5

**Communication with parents:**

Parents will be made aware of the introduction of multiplication to their child’s curriculum through the class news letter which is sent home monthly.